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MISO

Get more productivity by buying smart and training employees in maintenance.

By ROGER SIMONS

raining is an investment in productivity, not a cost. You can reduce the cost of doing business and get more productivity by selecting wisely and training employees in equipment maintenance. This can also improve labor recruitment and retention, and

can help differentiate you from your competitors. While landscape contractors generally agree, the next step — preparing a consistent, cost-effective program — is more problematic. Actually, this can be fairly simple, given the many resources available, but it does require commitment and follow-through. **Buy durable equipment**

Step one is to assess the applications for your equipment and don't skimp on price. Sometimes, especially for contractors just starting out, the urge to cut start-up costs leads to the purchase of throwaway equipment that becomes overmatched in

Hand-held equipment productivity

heavy-duty applications. Experience shows that buying durable tools yields long-term savings in service costs. If you're serious about your work, reject cheap equipment.

Smart chain saw selection

Even if you use chain saws only for light, infrequent duty, choose saws that are serviceable in the field and offer certain safety and comfort features. Key features to check include:

▶ good balance, high power-to-weight ratio and antivibration systems — all reduce operator fatigue.

controls, switches and handles — provide a high level of operator protection.

▶ top handles, textured handles, thumb grips and trigger supports — for extra control and comfort (remember to hold a saw with both hands, even if it has a top handle).

chain brakes — stop the chain and allow the engine to continue running without the chain being in motion.

▶ easily removable fuel and oil caps — check



Have employees check equipment daily and weekly for safe and productive operation.

that the fill openings are easy to access and whether a single tool or several tools are needed to exchange filters, spark plugs and the bar and chain.

Trimmer buying tips

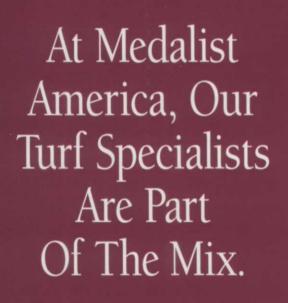
Low-vibration systems, design and ergonomic features apply to trimmers as well. Buying tips include:

compare noise levels of various models because noise is the most fatiguing factor for power equipment operators.

excessive vibration can be fatiguing too, because it travels through the trimmer shaft into the operators' arms and hands. Low-vibration systems isolate the engine and drive shaft from the handlebar and have support components with rubber dampers.

look for trimmers with easy access to serviceable parts (like the starter assembly), particularly those that can be disassembled quickly. This cuts downtime.

engine compartments should be tight, with



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Training wheels

Mobile units take instruction to dealers Look for local training at outdoor power equipment dealers this season, as six fully equipped mobile training units from Husqvarna Forest and Garden Co. hit the road. The fleet will log nearly one million miles each year traveling to dealers and customers across North America, including Canada.

Each 34-foot-long truck has eight student workstations and a big-screen terminal for video instruction and computer display. A miniature model store demonstrates display options and sales training. Special tools and equipment will help train students on product use and repair techniques.

Each regionally based unit is assigned a full-time instructor who facilitates each school. "We listened and found a solution when our power retailers told us they needed training to come to them, since travel is costly," said Roger Simons, director of technical services for Husqvarna.

In addition to holding three-day schools year-round in each training unit, Husqvarna hosts ongoing product update classes, new dealer training and regional dealer meetings. Dealers with technical/sales staff benefit further from customized classes and on-site training.

"Bringing hands-on, interactive training to our dealers' front doors ensures they are meeting the needs of their customers," said Dave Zerfoss, president of Husqvarna North America. "The mobile training units provide a unique education alternative."

The new mobile training units complement the Husqvarna North American Training Centers located in Charlotte, NC, and Albany, NY, as well as training centers in Canada.

Take advantage of resources

How can you get training for your employees? Several manufacturers offer dealer-sponsored training programs.

One example is Husqvarna's Team of

minimal exposure of the carburetor and other parts that could snag on or bang against objects on the job site.

▶ power level to a trimmer's cutting head determines what type of work it can do. Horsepower does not always indicate torque output of the total unit. Combine size of cut and acceleration capabilities to get a true sense of a trimmer's power and torque.



Technicians who are trained by equipment manufacturers can help you train your crew members. Photos: Husqvarna Forest & Garden

trimmers for heavy brush cutting or continuous running should carry lifetime shaft warranties.

ergonomic design such as angled front handles to allow operators to keep their left wrists in a straight, comfortable position. Adjustable handles accommodate different users comfortably. Trimmers are easiest to use when the handles have a firm grip and the cutting head naturally positions itself directly in front of the operator.

Understand how equipment works

Most repairs to commercial two-

Pros, which travels the world training dealers and contractors. Training is customized to meet trainees' needs. The chain saw portion of the training program, for example, covers chain saw safety, equipment maintenance and cutting methods.

Look for training videos developed in partnership industry associations, such as the International Society of Arboriculture and the Associated Landscape Contractors of America. These videos focus on safety, ergonomics, operator maintenance and other key topics.

The videos and companion study guides are great supplements to daily or weekly tailgate meetings, ongoing in-the-field training and competent supervision. cycle engine powered equipment result from improper:

- operating and service procedures;
- ▶ application of equipment for a job;
- maintenance;
- service records, or lack of;
- ▶ fuel/oil mixtures or dirty fuel.

Read your owner's manual as the first step in reducing downtime — it's the first thing your employees should do before using any piece of equipment. The time it takes to familiarize yourself with the manual will be repaid in extended product life, given proper operation and maintenance.

Resist any urge to hurry new crew members into the field; two-cycle equipment is not so simple that it should be operated without preparation. While operators should know simple maintenance techniques, they should know enough not to compensate for one disruption by creating another. For instance, they should never adjust air-fuel mixtures, when cleaning the air filter is required.

Landscape lovers: bad mechanics?

Some otherwise great employees who really enjoy beautifying landscapes might not have the equipment expertise to service their own equipment beyond routine upkeep. Instead of struggling with equipment downtime or machines that do not perform well, you might be better off leaving equipment servicing to a service technician. Often, a new spark plug, air filter or *continued on page 36* fuel filter, along with a tachometer-assisted carburetor adjustment, can do wonders for equipment performance and daily output.

Technicians who are trained by equipment manufacturers can provide the most knowledgeable maintenance and can help you train your workforce.

Check equipment before and after operation, based on manufacturer guidelines. Here are specific checkpoints:

Daily checklist for two-cycle equipment:

Clean the air filter.

Inspect the engine shrouding for any deterrent to clean airflow.

Check the air filter cover and air filter box to guard against intake of unfiltered air that could damage the engine.

Remove grass, dirt and other debris off the housing around the engine. Debris build-up could cause excess heat that might mean premature engine damage. Remove string and weeds that twist around the gearbox or cutter head shaft.

On trimmers, check the deflector to make sure it is attached and intact - otherwise, it is unsafe, can allow too much line out and can overload the engine.

Check starter ropes for frays.

Check throttle for open and idle.

Check stop switch and safety functions.

Daily chain saw checklist:

Make sure the chain brake is clean and free of sawdust or dirt and the brake band is not worn. Test before cutting.

Inspect air filters.

Be sure the chain is sharp and assembled at proper tension. Keep a spare chain on the job.

Look for excessive handle movement, which might indicate a broken mount.

Inspect the throttle safety lock, chain catcher pin and all guards and handles, including the stop switch.

Make sure the engine and chain are properly lubricated.

Use the correct gas-oil mix.

End of day chain saw checklist:

Inspect the entire saw, tightening all external hardware and cleaning away debris.

Check safety features like stop switches, chain brakes and chain catchers.



nance helps maximize your opportunities for success and profitable operation.

Check that the throttle trigger works smoothly and that the trigger cannot be pulled until the trigger lockout is depressed.

Remove and clean air filters.

Remove the bar and chain, clean bar grooves.

Clean clutch cover and bar pad areas. Rotate bar when reinstalling to promote longer life through even wear of the bar.

Be vigilant about keeping dirty fuel out of your equipment (sometimes the fuel itself might be dirty). Also inspect fuel containers for debris along the rim (debris-laden fuel can clog a fuel system). If rain water dilutes fuel, the engine might not start.

Performing daily upkeep might be the responsibility of the crew foreman, but operators should have general operating knowledge of the equipment, safety features and chain tensioning. An experienced in-house mechanic or equipment dealer can complete your maintenance team.

End of week checklist (all equipment):

Check the grease in the gear head to make sure its at the manufacturer-recommended level.

Inspect the spark arrestor screen, then clean or replace, according to manufacturer guidelines.

Check fuel lines for cuts or deterioration.

Use a tachometer to check engine rpm at idle and full throttle. Adjusting the carburetor by sound to set rpm levels, without using a tachometer, might cause you to miss an air leak or other serious problem.

Check that rubber or spring mounts on anti-vibration systems are secure.

On trimmers, inspect the string heads spool and housing for breaks or cracks and never use a string head or blade with a visible break or crack. Also check the bump knob and evelets for wear.

Be on the lookout for trimmer welding, which occurs when the line actually melts and adheres to one adjacent to it inside the trimmer head. Welding results from friction caused by excessive vibration or rpm, which could indicate another problem.

Record your maintenance

When you've bought the right equipment, trained your people to use it and implemented a maintenance routine, you still need one more key ingredient for your upkeep system: records. Delays for service often result from neglecting to keep accurate, updated service records. So record service intervals and keep track of oil and filter changes, parts replacement, dates and types of equipment problems.

Note equipment use hours as a way of servicing at regular intervals. Each work crew can designate a maintenance overseer to keep track of hours and make sure service is kept on schedule. The appointed

person can also check that clean fuel containers hold fresh fuel. LM -Roger Simons is director of technical services/sales support with Husqvarna Forest & Garden Co., Charlotte, NC



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Get serious about irrigation

Ready to expand an existing irrigation contracting business? Read how to make it work better, smarter and more profitably

By BRUCE SHANK

or many of you, it may make perfect sense to include irrigation installation, expanded maintenance or related services in your mix. There are advantages to being both the installer of the landscape and the installer of the irrigation. After all, you're already familiar with change orders and the site. In fact, you install landscapes realizing the limitations of the irrigation system.

What equipment will you need?

If you will perform a significant amount

of irrigation installation, use custom-designed trucks to carry pipe, fittings and a trencher. Drawers will organize fittings by pipe size. A complete range of fittings will reduce trips to the distributor or the shop. Consider a walk-behind sod cutter too, along with a small bilge pump and an electrical fault detector. You will run into cases where you need to burrow under sidewalks or driveways and proper equipment can save hours and reduce the disturbance.

If you're expanding current irrigation maintenance services, pay attention to the equipment that you use. Many irrigation repairs can be performed without expensive equipment, as long as you pay attention to details. Sprinklers might look alike, but they can have different nozzles and different patterns. Adjustment screws, on both sprinklers and valves, can change precipitation rates and disrupt uniformity.

Stick with the same brand and model sprinklers on irrigation zones. Look for brands that offer matched precipitation. Do not mix sprayheads with rotors on the

> same zone. Be aware that elevation affects pressure and pressure impacts flow rate. Pipe size also influences flow rate.

Drip zones will require pressure regulators. The irrigation controller should provide enough zones to separate plants by their water needs. Cheap controllers don't offer the expandability, the reliability or features like multiple starts, longer run times or sensor feedback.

You're an irrigation contractor if .

- 1. You like to play golf in the rain
- 2. You leave the windows open at the car wash
- 3. You know how many gallons are in an acre-foot
- 4. You don't think of ET as a movie character.
- 5. You have a pitot tube in the glove box of your truck
- 6. You call the sticky liquid in the can 'cement' instead of 'glue'
- 7. You notice the roots of plants when digging a hole
- 8. You have words for 10 different shades of green
- 9. Your feet detect extremely minor differences in the hardness of the ground as you walk
- 10. Your favorite dog is a Labrador

Seek training before you attempt to install commercial or complex residential systems. Also develop a working relationship with local water agencies and the plumbing contractor on the job to make sure backflow prevention and cross-connection problems are covered by the book. These are issues best resolved by an irrigation consultant, especially in regard to sizing of the irrigation supply line.

Forget those callbacks

Callbacks are a money loser for all contractors. A buried valve installed backwards or a leak from a poorly cemented joint can cost you precious time and rev*continued on page* 42



Arm your irrigation tech with knowledge and communication.

